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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,129	11/20/2003	Jeffery Michael Barnes	TUC920030145US1	2241
46917	7590	05/19/2006	EXAMINER	
KONRAD RAYNES & VICTOR, LLP. ATTN: IBM37 315 SOUTH BEVERLY DRIVE, SUITE 210 BEVERLY HILLS, CA 90212			SUN, SCOTT C	
			ART UNIT	PAPER NUMBER
			2182	

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/719,129	BARNES ET AL.	
	Examiner	Art Unit	
	Scott Sun	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/1/2006 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2, 10, 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claims 2, 10 and 18, examiner notes that the newly added limitations in the independent claims recite "one or more primary control units that are notified to temporarily stop sending data are selected based on which ones are using a largest amount of resources". However, claims 2, 10, and 18 recite "all primary control units are notified to temporarily sending data", which appear to be inconsistent with the selection process stated in the independent claims. Specifically, the independent

claims are directed to an embodiment (paragraph 46; figure 6) that is different from the embodiment described in claims 2, 10, and 18 (paragraph 39, figure 3A). Accordingly, because the embodiment described in claims 2, 10, and 18 does not include a selection process, but the embodiment described in the independent claims requires such a process, there are inconsistencies in the claims.

5. The following rejections are made based on the examiner's best interpretation of the claims in light of the 35 USC 112 rejections above.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 5-9, 13-17, 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Tzeng et al (PG Pub #US 2003/0210651) in view of Aiken et al (PG Pub #US 2002/0053011).

8. As per claim 1, Tzeng discloses a method (figure 4) for throttling data transfer, comprising; determining an amount of resources (buffer capacity) that are in use (paragraph 26);

When the amount of resources reaches a high threshold (low watermark), notifying one or more primary control units (pause capable devices) to temporarily stop sending data by sending a message (PAUSE frame; paragraphs 41, 42);

Tzeng further discloses when the amount of resources reaches a low threshold (PAUSE off watermark), notifying each previously notified primary control unit to resume sending data by sending a message (PAUSE off frame; paragraph 26).

Tzeng does not disclose explicitly primary control units are selected based on which ones are using a largest amount of resources. However, Aiken teaches one or more primary control units that are notified to temporarily stop sending data are selected based on which ones are using a largest amount of resources (figures 3A, B; paragraph 41). Examiner notes that Aiken teaches that a resource requestor may be given more resources than its fair share, but when the total of amount of resources in use pass a threshold (all except safety buffer is used), the requestors using the largest amount (exceeding their fair share) are denied access to the resources. Examiner further notes that Aiken teaches a fair share can be calculated by dividing the total amount of resources by the number of requestors so each fair share is equal (paragraph 33), and consequently those exceeding their fair share must be using more resources than those that do not exceed their fair share.

Teachings of Tzeng and Aiken are from the same field of resource sharing. Therefore, it would have been obvious to a person of ordinary skill at the time of invention to combine teachings of Tzeng and Aiken by using the fair share allocation scheme disclosed by Aiken in the system of Tzeng for the benefit of increasing fairness

of resource distribution and efficiency and throughput of the overall system (paragraph 14).

9. As per claim 2, Aiken and Tzeng combined disclose the method of claim 1, and Tzeng further discloses notifying all primary control units to temporarily sending data (paragraph 26). Examiner notes that all pause capable devices are sent PAUSE frames when low and high watermarks are exceeded.

10. As per claim 3, Aiken and Tzeng combined disclose the method of claim 1, and Tzeng further discloses at a primary control unit, resuming sending data after a predetermined period of time has expired without receipt of notification to resume sending data (paragraph 26).

11. As per claim 4, Aiken and Tzeng combined disclose the method of claim 1, and Tzeng further discloses when the amount of resources used is above a final threshold (high watermark), re-notifying the one or more primary control units to temporarily stop sending data (paragraph 26).

12. As per claim 6, Tzeng and Aiken combined disclose the method of claim 1, and Aiken further discloses wherein the amount is measured by a percentage (paragraph 33)

13. As per claim 7, Tzeng and Aiken combined disclose the method of claim 1, and Aiken further discloses wherein the one or more primary control units selected have not already received a message to temporarily stop sending data without a subsequent message to resume sending data (paragraphs 42-44). Examiner notes that Aiken teaches requestors that exceed their fair share are denied further request until the

resource threshold is no longer exceeded. Accordingly, these requestors selected to stop sending data would receive message to stop sending data without a subsequent message to resume sending data until the resources in use are below threshold.

14. As per claim 8, Aiken and Tzeng combined disclose the method of claim 7, and Aiken further discloses maintaining information on the amount of resources being used by each primary control unit (paragraph 11, 16)

15. As per claims 9-12, 14-20, 22-24 the examiner finds these claims differ from the above rejected claims only in statutory category. The same arguments used in rejection of the above claims are applicable in rejection of these claims.

16. Claims 5, 13, 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Tzeng in view of Aiken and further in view of Reinemann (PG Pub #2003/0115118).

17. As per claim 5, Tzeng and Aiken combined disclose claim 1, but do not disclose explicitly wherein at least one of the resources is a cache. However, Reinemann disclose a resource sharing system in which one of the resources is a cache (paragraph 11). Teachings of Tzeng, Aiken, and Reinemann are from the same art of shared resource management.

Therefore, it would have been obvious for a person of ordinary skill in the art at the time of invention to combine teachings of Tzeng, Aiken, and further with Reinemann by applying the combined resource sharing system of Tzeng and Aiken to CPU, DRAM, and cache for the benefit of increased flexibility of the system.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Sun whose telephone number is (571) 272-2675. The examiner can normally be reached on M-F, 10:30am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ss
5/12/2006



KIM HUYNH
SUPERVISORY PATENT EXAMINER

5/14/06